Speech to the 3rd Motor Vehicle Safety Symposium
United Nations University
Tokyo, Japan
September 17, 2002

Mr. Nakayama, Professor Iguchi, ladies and gentlemen, I am honored to be with you today at this important meeting, to speak about our most pressing safety problems and our priority vehicle safety programs. I lead an agency of the United States Government that is responsible for reducing deaths and injuries on the nation's roadways. I was appointed to the job by President Bush, and came to the National Highway Traffic Safety Administration following 20 years of emergency medicine practice and teaching at the Department of Emergency Medicine in Charlotte, North Carolina. My vision of highway safety was shaped by my experience as an emergency physician. Each and every day I saw the human side of vehicle crashes – deaths and injuries that could have been prevented. And since I took on the job of leading NHTSA, I am now even more aware of the value of preventative actions in vehicle safety, driver behavior, the roadway environment, and the interactions between them. The message I bring to you today is that the motor

vehicle industry and the academic community share responsibility with governments to look at safety in a comprehensive, interconnected way.

Motor vehicle safety is a worldwide concern. Currently motor vehicle injury is the leading cause of injury death worldwide.[1] While our mix of crashes and vehicles is different in the U.S. than here in Japan, we share a common concern for the tragic deaths and suffering due to injury that occur in both of our nations each day. I commend you for your progress in reducing the number of traffic fatalities in Japan, a steady decline from 11,451 in 1992 to 8,747 in 2001 - an impressive reduction.[2] I understand your success can be attributed to a number of different measures, including seat belt use, stronger vehicle standards, new driver programs, reducing dangerous driving, and better emergency care. However, I am also aware of your concern for the growing number of total crashes (up 25 percent since 1995) and non-fatal injuries, the proportion of pedestrian crashes (28 percent), and increases in older population fatalities, especially for pedestrians. [3]

We have made progress in the U.S. against ever increasing numbers of vehicles on the road and higher vehicle miles of travel. Our work at NHTSA is driven by the data. In 2001, 42,116 people lost their lives in highway crashes, mostly unchanged from 2000, and more than 3 million people were injured.[4] These crashes cost our nation over $230 billion each year, $820 for each man, woman and child in the U.S.[5] We in the U.S. also have a set of goals that we have committed to work toward. In the U.S., exposure, as measured in VMT, increases every year. Our current fatality rate is 1.52 per l00M VMT. We have been given the goal by our Secretary of Transportation to reduce this to 1.0 per 100M VMT by 2008. To do this, we need to reduce fatalities by 9,000 in the next 6 years. We need the help of the motor vehicle industry and academic institutions to deal with these critical problems. My highest priorities to make reductions in these numbers are: seat belt use, drunk driving, vehicle compatibility, vehicle rollover, and better crash data to inform speedier rulemaking and enforcement actions. We have formed interdisciplinary teams to focus on these issues. Progress in these areas

will make the biggest difference in safety, and vehicle safety is a vital component.

[Seat belt use/belt reminders] Seat belt use in the United States has increased to 75 percent through passage and enforcement of state laws and through consumer education; yet, over one-fourth of Americans do not buckle up. We have estimated that more than 9,200 people died and 143,000 were injured in 2000 because they were not wearing seat belts. The 2001 Fatality Analysis Reporting System data shows that while 73% of restrained occupants survive, only 44 % of unrestrained occupants survive crashes in which someone is killed. For every one percent increase in use, 2.3 million more people wear their belts, which saves 270 lives and $800 million in cost to society.[6] We have committed to raise seat belt use to 78 percent by the end of 2003. This is an area where there is an important connection between vehicle features and human behavior. There is current technology available to remind people to wear their belts. Vehicle manufacturers can make a significant contribute to lifesaving improvements in belt use through systems to

remind occupants to buckle up. Data shows that about one fourth of non-users simply forget to buckle up. According to a recent study by the Insurance Institute for Highway Safety, the percent of occupants using their belts increased by 6 percentage points in vehicles with the Ford Motor Company's belt minder system.[7] The National Academy of Sciences is conducting a study, required by Congress, on whether other unobtrusive technologies could increase seat belt use. Interest in this subject is not limited to the U.S.. Sweden and Australia have begun investigating vehicle-based seat belt reminder systems. In February of this year I sent a letter to automotive industry CEO's asking for a voluntary commitment to install technology that would encourage drivers and passengers to buckle up. This kind of government/industry cooperation is <u>essential</u>, along with vehicle safety standards, to achieve safer vehicles and better occupant protection.

[Rulemaking Priorities] NHTSA issues and enforces compliance with our Federal Motor Vehicle Safety Standards, which cover the vehicle systems that are most critical to safety. At the end of July we published

a *Vehicle Safety Rulemaking Priorities* plan for public comment, which identifies our most important actions on the FMVSS for the next 4 years.[8] I invite you to review and comment on this plan. The plan also covers the vehicle safety consumer information we provide to the public, which encourages manufacturers to provide high levels of crash avoidance and crashworthiness in new vehicles.

The fleet of vehicles on the road in the U.S. has shifted dramatically. For decades, the light vehicle category consisted primarily of automobiles. The growing popularity over the past 10 years of light trucks, vans, and sport utility vehicles has changed the marketplace as well as the safety picture. There are now over 76 million of these vehicles on the road, about 35 percent of registered vehicles in the U.S. Over half of new vehicles sold in the U.S. are light trucks. Most are used as private passenger vehicles and the miles driven in them increased 70 percent between 1990 and 2000. [9] This shift in vehicle mix is especially important for two of my top safety priorities: light vehicle rollover and vehicle compatibility.

[Rollover] Our comprehensive approach to one of our highest priority programs – vehicle rollover - emphasizes the value of actions in both rulemaking and consumer information.

Total fatalities in rollover crashes exceed 10,000 each year. In 2001, passenger vehicle occupant fatalities in single vehicle rollover crashes increased 2.3 percent, to 8,400, with pickup trucks accounting for the biggest increase (4.2 percent). And the growing share of light trucks – SUV's, van, and pickup trucks – creates new challenges in the problem of rollover crashes. In 2001 the share of occupant fatalities in rollover crashes, for LTV's was over twice as high (48%) as for passenger cars (22%). Rollover crashes are especially lethal: while rollovers account for less than 6 percent of crashes in the United States, they account for more than 31 percent of occupant deaths. Occupant ejection is a particular problem. Here the linkage with seat belt use is very important. Occupants stand a much better chance of surviving a crash if they are not ejected from their vehicles. Four of five people killed in single vehicle rollover crashes were not wearing their seat belts. In the

year 2000, 8,847 people were killed and 27,000 were injured when they were ejected from light vehicles, and two-thirds of these ejections occurred during rollovers. In addition to increasing belt use in these crashes, we are developing rulemaking actions for stronger door latches and improved glazing to prevent occupant ejection. Another problem, for those who are belted, is severe head and neck injuries through impact with the roof. Roof crush intrusion potentially contributes to serious or fatal occupant injury in 26 percent of rollover crashes. Actions to revise FMVSS 216 for improved roof crush protection are also under review.

To prevent rollovers from occurring, we provide consumer information on rollover resistance of new vehicles and we educate the public on the problem of rollover and safe driving behavior. Consumers, Congress and the National Academy of Sciences have called for NHTSA to broaden the scope of the information it provides to the public. Since 2001, we have published Static Stability Factor ratings on light vehicle rollover resistance through the New Car Assessment Program. We have also conducted tests and are developing a proposal for a dynamic test

ratings program for light vehicle rollover, which will be published soon This comprehensive approach can achieve great benefits and we look forward to working with you to solve this problem.

[Vehicle compatibility] Another one of my top priorities is vehicle compatibility. Recent studies of crash data, have raised issues of concern. One measure of vehicle aggressivity, driver fatalities in a collision partner over the number of crashes in the subject vehicle, has indicated that this measure for small SUV's in frontal crashes is about twice as large as the large car category. In side crashes the "vulnerability index" indicates that all passenger cars are higher than any light truck category.[10]

In the crash avoidance area, there may be problems of LTV's blocking vision of passenger car and motorcycle drivers and there are many complaints of glare due to higher mounted headlamps. Over 3,900 comments were submitted to our recent Request for Comment on headlight glare. Clearly, this is a major concern of the traveling public.

In the crashworthiness area, we have seen differences in injuries and fatalities, particularly in side impact crashes, between LTV's and passenger cars. We will make rulemaking decisions in 2003 on glare reduction.

NHTSA has been conducting a research program for several years on the crashworthiness issues in vehicle compatibility. One of our priority interdisciplinary teams is evaluating the problem of vehicle aggressivity and incompatibility in multi-vehicle crashes. That team will gather all available data and make recommendations as to how we can reduce injuries by eliminating structural and geometric incompatibilities between different types of vehicles. We are examining the problem through crash statistics and crash test data, and identifying crash causation factors and possible compatible vehicle designs. We are also exploring harmonization of research and proposed compatibility test procedures. We expect to make rulemaking decisions in 2003, based on this research. It is also very important to me that our vehicle safety

consumer information include indicators of vehicle "aggressiveness" toward other vehicles.

[Emerging technologies] I want to re-emphasize my message that the motor vehicle industry and academic community shares the responsibility to look at safety in a comprehensive way. There is no area more important in this regard than new vehicle technologies, which are being introduced at a very rapid pace. Technologies such as heads-up displays, navigation systems, and communications systems, among others, must be evaluated within the overall context of the vehicle, the roadway environment, and drivers' abilities to safely perform the driving task. Addition of in-vehicle technologies one at a time, without regard to their total effects, can create more safety problems. Many of you are familiar with the investigations on the use of cell phones. The 1997 study published in the New England Journal of Medicine concluded that the distraction caused by phone use in motor vehicles quadrupled the risk of a collision during the brief period of a call.[11] Other studies - conducted in the U.S. as well as in Great Britain and Japan - have also

concluded that speaking on mobile phones, even if they are hands-free, can impair a driver's ability to safely operate the vehicle. Some standardized design parameters may be needed to reduce driver confusion. Development of workload evaluation protocols may help provide consumer information about device distraction. As we at NHTSA continue our research, public education and other actions on driver distractions, I ask you to carefully consider safety as you introduce new technologies.

There are also emerging technologies that make a positive contribution to safety. The Intelligent Vehicle Initiative has conducted research on promising crash avoidance technologies. Our *Vehicle Safety Rulemaking Priorities* plan identifies Rear End Collision Avoidance Systems/Stopped Vehicle Signal Systems and Roadway Departure Collision Avoidance Systems as possible candidates for rulemaking in the next 4 years.

There are other areas of priority in our multi-year rulemaking plan that are focused on large safety problems. The addition of offset frontal protection to FMVSS 208 and improvements in FMVSS 214 for side impact protection are aimed at large numbers of fatalities and serious injuries. Other important areas in our multi-year rulemaking plan are improvements in vehicle lighting, brakes, tires, and child safety standards.

In my time today I wanted to convey to you my highest priorities and invite you to join with us at NHTSA in moving these initiatives forward. Thank you for the opportunity to speak to you today.

---

[1] Peden, MM, Krug, E., Mohan, D., et.al. *Five-Year WHO Strategy for Road Traffic Injury Prevention*, Geneva: World Health Organisation, 2001, WHO/NMH/VIP/01.03.
[2] National Police Agency, Japan, Annual Trends in Fatalities (1992-2001), , website.
[3] Traffic Safety Policy Office, Management and Coordination Agency, *White Paper on Traffic Safety in Japan, '99*, 2000.
[4] National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS), 2001, August, 2002. [FARS (annual) is also the source for all fatality data in this speech, not otherwise referenced]
[5] Blincoe, LJ, et.al *, Economic Costs of Motor Vehicle Crashes, 2000*,., May, 2002, DOTHS 809-446.
[6] Ibid.
[7] Insurance Institute for Highway Safety (IIHS), Press Release*, Belt Use Increase: Reminder System in Fords Persuades More Drivers to Buckle Their Belts,* December 20, 2001.
[8] *NHTSA Vehicle Safety Rulemaking Priorities: 2002-2006*, National Highway Traffic Safety Administration, published in the Federal Register July 25, 2002, Docket No. NHTSA-2002-12391, closes September 23, 2002.
[9] *Highway Statistics*, Federal Highway Administration.

[10] Hollowell, WT, Summers, SM and Prasad, A., *NHTSA's Research Program for Vehicle Aggressivity and Fleet Compatibility*, May, 2002.
[11] Redelmeier, DA and Tibshirani, RJ, *Association between Cellular Phone Calls and Motor Vehicle Collisions*, New England Journal of Medicine, 336(7), 453-458, 1997.